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ABSTRACT

The House Committee on Energy and Commerce submitted this report on a bill that would establish procedures to improve the identification, allocation, and assignment of radio frequencies to the electromagnetic spectrum and for other purpose. The committee proposed an amendment to this bill, and recommended that it be passed as amended. Known as the "Emerging Telecommunications Technologies Act of 1991," the bill, H.R. 531, reallocates the radio frequency spectrum to promote the development of new technologies for commercial purposes. This report: presents the proposed amendment; discusses the purpose of the bill and provides a summary of its provisions; provides information on the background of the legislation and the need for it; briefly reviews hearings on the bill; reviews the committee's consideration of the bill, its oversight findings, and the committee's estimate of the cost for carrying out the provisions of the bill; and presents the Congressional Budget Office estimate and an Inflationary Impact Statement together with section-by-section analyses and discussion. (DB)

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ED343579

102D CONGRESS
1st Session

HOUSE OF REPRESENTATIVES

REPORT
102-113

EMERGING TELECOMMUNICATIONS TECHNOLOGIES ACT OF 1991

JUNE 18, 1991.—Committed to the Committee of the Whole House on the State of the Union and ordered to be printed

Mr. DINGELL, from the Committee on Energy and Commerce, submitted the following

REPORT

[To accompany H.R. 531]

[Including cost estimate of the Congressional Budget Office]

The Committee on Energy and Commerce, to whom was referred the bill (H.R. 531) to establish procedures to improve the allocation and assignment to the electromagnetic spectrum, and for other purposes, having considered the same, reports favorably thereon with an amendment and recommends that the bill as amended do pass.

CONTENTS

	Page
The Amendment	2
Purpose and Summary	7
Background and Need for Legislation	8
The Radio Spectrum	8
Spectrum Management	8
Spectrum Utilization	9
International Considerations	9
Hearings	10
Committee Consideration	11
Committee Oversight Findings	11
Committee on Government Operations	11
Committee Cost Estimate	11
Congressional Budget Office Estimate	11
Inflationary Impact Statement	14
Section-by-Section Analysis and Discussion	14
Section 1—Short Title	14
Section 2—Findings	14
Section 3—National Spectrum Planning	15
Section 4—Identification of Reallocable Frequencies	16
Section 5—Withdrawal of Assignment to Government Stations	19

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Section 6—Distribution of Frequencies by the Commission 20
Section 7—Authority to Recover Reassigned Frequencies 21
Section 8—Definitions 21

The amendment is as follows:

Strike out all after the enacting clause and insert in lieu thereof the following:

SECTION 1. SHORT TITLE.

This Act may be cited as the "Emerging Telecommunications Technologies Act of 1991".

SEC. 2. FINDINGS.

The Congress finds that—

(1) the Federal Government currently reserves for its own use, or has priority of access to, approximately 40 percent of the electromagnetic spectrum that is assigned for use pursuant to the Communications Act of 1934;

(2) many of such frequencies are underutilized by Federal Government licensees;

(3) the public interest requires that many of such frequencies be utilized more efficiently by Federal Government and non-Federal licensees;

(4) additional frequencies are assigned for services that could be obtained more efficiently from commercial carriers or other vendors;

(5) scarcity of assignable frequencies for licensing by the Commission can and will—

(A) impede the development and commercialization of new telecommunications products and services;

(B) limit the capacity and efficiency of the United States telecommunications systems;

(C) prevent some State and local police, fire, and emergency services from obtaining urgently needed radio channels; and

(D) adversely affect the productive capacity and international competitiveness of the United States economy;

(6) a reassignment of these frequencies can produce significant economic returns; and

(7) the Secretary of Commerce, the President, and the Federal Communications Commission should be directed to take appropriate steps to correct these deficiencies.

SEC. 3. NATIONAL SPECTRUM PLANNING.

(a) PLANNING ACTIVITIES.—The Assistant Secretary of Commerce for Communications and Information and the Chairman of the Commission shall meet, at least biannually, to conduct joint spectrum planning with respect to the following issues—

(1) the future spectrum requirements for public and private uses, including State and local government public safety agencies;

(2) the spectrum allocation actions necessary to accommodate those uses; and

(3) actions necessary to promote the efficient use of the spectrum, including spectrum management techniques to promote increased shared use of the spectrum that does not cause harmful interference as a means of increasing commercial access.

(b) REPORTS.—The Assistant Secretary of Commerce for Communications and Information and the Chairman of the Commission shall submit a joint annual report to the Committee on Energy and Commerce of the House of Representatives, the Committee on Commerce, Science, and Transportation of the Senate, the Secretary, and the Commission on the joint spectrum planning activities conducted under subsection (a) and recommendations for action developed pursuant to such activities.

(c) REPORTING REQUIREMENTS.—The first annual report submitted after the date of the report by the advisory committee under section 4(d)(4) shall—

(1) include an analysis of and response to that committee report; and

(2) include an analysis of the effect on spectrum efficiency and the cost of equipment to Federal spectrum users of maintaining separate allocations for Federal Government and non-Federal Government licensees for the same or similar services.

SEC. 4. IDENTIFICATION OF REALLOCABLE FREQUENCIES.

(a) IDENTIFICATION REQUIRED.—The Secretary shall, within 24 months after the date of the enactment of this Act, prepare and submit to the President and the Congress a report identifying bands of frequencies that—

(1) are allocated on a primary basis for Federal Government use and eligible for licensing pursuant to section 305(a) of the Act (47 U.S.C. 305(a));

(2) are not required for the present or identifiable future needs of the Federal Government;

(3) can feasibly be made available, as of the date of submission of the report or at any time during the next 15 years, for use under the Act (other than for Federal Government stations under such section 305);

(4) will not result in costs to the Federal Government, or losses of services or benefits to the public, that are excessive in relation to the benefits that may be obtained by non-Federal licensees; and

(5) are most likely to have the greatest potential for productive uses and public benefits under the Act.

(b) MINIMUM AMOUNT OF SPECTRUM RECOMMENDED.—

(1) IN GENERAL.—Based on the report required by subsection (a), the Secretary shall recommend for reallocation, for use other than by Federal Government stations under section 305 of the Act (47 U.S.C. 305), bands of frequencies that span a total of not less than 200 megahertz, that are located below 6 gigahertz, and that meet the criteria specified in paragraph (1) through (4) of subsection (a). The Secretary may not include, in such 200 megahertz, bands of frequencies that span more than 20 megahertz and that are located between 5 and 6 gigahertz. If the report identifies (as meeting such criteria) bands of frequencies spanning more than 200 megahertz, the report shall identify and recommend for reallocation those bands (spanning not less than 200 megahertz) that meet the criteria specified in paragraph (5) of such subsection.

(2) MIXED USES PERMITTED TO BE COUNTED.—Bands of frequencies which the Secretary's report recommends be partially retained for use by Federal Government stations, but which are also recommended to be reallocated to be made available under the Act for use by non-Federal stations, may be counted toward the minimum spectrum required by paragraph (1) of this subsection, except that—

(A) the bands of frequencies counted under this paragraph may not count toward more than one-half of the minimum required by paragraph (1) of this subsection;

(B) a band of fequencies may not be counted under this paragraph unless the assignments of the band to Federal Government stations under section 305 of the Act (47 U.S.C. 305) are limited by geographic area, by time, or by other means so as to guarantee that the potential use to be made by such Federal Government stations is substantially less (as measured by geographic area, time, or otherwise) than the potential use to be made by non-Federal stations; and

(C) the operational sharing permitted under this paragraph shall be subject to coordination procedures which the Commisison shall establish and implement to ensure against harmful interference.

(c) CRITERIA FOR IDENTIFICATION.—

(1) NEEDS OF THE FEDERAL GOVERNMENT.—In determining whether a band of frequencies meets the criteria specified in subsection (a)(2), the Secretary shall—

(A) consider whether the band of frequencies is used to provide a communications service that is or could be available from a commercial carrier or other vendor;

(B) seek to promote—

(i) the maximum practicable reliance on commercially available substitutes;

(ii) the sharing of frequencies (as permitted under subsection (b)(2));

(iii) the development and use of new communications technologies; and

(iv) the use of nonradiating communications systems where practicable; and

(C) seek to avoid—

(i) serious degradation of Federal Government services and operations; and

(ii) excessive costs to the Federal Government and users of Federal Government services.

(2) FEASIBILITY OF USE.—In determining whether a frequency band meets the criteria specified in subsection (a)(3), the Secretary shall—

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(A) assume such frequencies will be assigned by the Commission under section 303 of the Act (47 U.S.C. 303) over the course of not less than 15 years;

(B) assume reasonable rates of scientific progress and growth of demand for telecommunications services;

(C) determine the extent to which the reallocation or reassignment will relieve actual or potential scarcity of frequencies available for licensing by the Commission for non-Federal use;

(D) seek to include frequencies which can be used to stimulate the development of new technologies; and

(E) consider the immediate and recurring costs to reestablish services displaced by the reallocation of spectrum.

(3) COMMERCIAL USE.—In determining whether a band of frequencies meets the criteria specified in subsection (a)(4), the Secretary shall consider—

(A) the extent to which equipment is available that is capable of utilizing the band;

(B) the proximity of frequencies that are already assigned for commercial or other non-Federal use; and

(C) the activities of foreign governments in making frequencies available for experimentation or commercial assignments in order to support their domestic manufacturers of equipment.

(4) POWER AGENCY FREQUENCIES.—

(A) ELIGIBILE FOR MIXED USE ONLY.—The frequencies assigned to any Federal power agency may only be eligible for mixed use under subsection (b)(2) in geographically separate areas and shall not be recommended for the purposes of withdrawing that assignement. In any case where a frequency is to be shared by an affected Federal power agency and a non-Federal user, such use by the non-Federal user shall, consistent with the procedures established under subsection (b)(2)(C), not cause harmful interference to the affected Federal power agency or adversely affect the reliability of its power system.

(B) DEFINITION.—As used in this paragraph, the term "Federal power agency means the Tennessee Valley Authority, the Bonneville Power Administration, the Western Area Power Administration, or the Southwestern Power Administration.

(d) PROCEDURE FOR IDENTIFICATION OF REALLOCABLE BANDS OF FREQUENCIES.—

(1) SUBMISSION OF PRELIMINARY IDENTIFICATION TO CONGRESS.—Within 12 months after the date of the enactment of this Act, the Secretary shall prepare and submit to the Congress a report which makes a preliminary identification of reallocable bands of frequencies which meet the criteria established by this section.

(2) CONVENING OF ADVISORY COMMITTEE.—Not later than the date the Secretary submits the report required by paragraph (1), the Secretary shall convene an advisory committee to—

(A) review the bands of frequencies identified in such report;

(B) advise the Secretary with respect to (i) the bands of frequencies which should be included in the final report required by subsection (a), and (ii) the effective dates which should be established under subsection (e) with respect to such frequencies;

(C) receive public comment on the Secretary's report and on the final report; and

(D) prepare and sumit the report required by paragraph (4).

The advisory committee shall meet at least monthly until each of the actions required by section 5(a) have taken place.

(3) COMPOSITION OF COMMITTEE; CHAIRMAN.—The advisory committee shall include—

(A) the Chairman of the Commission and the Assistant Secretary of Commerce for Communications and Information, and one other representative of the Federal Government as designated by the Secretary; and

(B) representatives of—

(i) United States manufacturers of spectrum-dependent telecommunications equipment;

(ii) commercial carriers;

(iii) other users of the electromagnetic spectrum, including radio and television broadcast licensees, State and local public safety agencies, and the aviation industry; and

(iv) other interested members of the public who are knowledgable about the uses of the electromagnetic spectrum.

A majority of the members of the committee shall be members described in subparagraph (B), and one of such members shall be designated as chairman by the Secretary.

(4) RECOMMENDATIONS OF SPECTRUM ALLOCATION PROCEDURES.—The advisory committee shall, not later than 36 months after the date of the enactment of this Act, submit to the Secretary, the Commission, the Committee on Energy and Commerce of the House of Representatives, and the Committee on Commerce, Science and Transportation of the Senate, a report containing such recommendations as the advisory committee considers appropriate for the reform of the process of allocating the electromagnetic spectrum between Federal and non-Federal use, and any dissenting views thereon.

(e) TIMETABLE FOR REALLOCATION AND LIMITATION.—

(1) TIMETABLE REQUIRED.—The Secretary shall, as part of the report required by subsection (a), include a timetable that recommends immediate and delayed effective dates by which the President shall withdraw or limit assignments on the frequencies specified in the report.

(2) EXPEDITED REALLOCATION OF INITIAL 30 MHZ PERMITTED.—The Secretary may prepare and submit to the President a report which specifically identifies an initial 30 megahertz of spectrum that meets the criteria described in subsection (a) and that can be made available for reallocation immediately upon issuance of the report required by this section.

(3) DELAYED EFFECTIVE DATE.—The recommended delayed effective dates shall—

(A) permit the earliest possible reallocation of the frequency bands, taking into account the requirements of section 6(1);

(B) be based on the useful remaining life of equipment that has been purchased or contracted for to operate on identified frequencies.

(C) be based on the need to coordinate frequency use with other nations; and

(D) take into account the relationship between the costs to the Federal Government of changing to different frequencies and the benefits that may be obtained from commercial and other non-Federal uses of the reassigned frequencies.

SEC. 5. WITHDRAWAL OF ASSIGNMENT TO FEDERAL GOVERNMENT STATIONS.

(a) IN GENERAL.—The President shall—

(1) within 6 months after receipt of the Secretary's report under section 4(a), withdraw this assignment to a Federal Government station of any frequency which the report recommends for immediate reallocation;

(2) within such 6-month period, limit the assignment to a Federal Government station of any frequency which the report recommends be made immediately available for mixed use under section 4(b)(2);

(3) by the delayed effective date recommended by the Secretary under section 4(e) (except as provided in subsection (b)(4) of this section), withdraw or limit the assignment to a Federal Government station of any frequency which the report recommends be reallocated or made available for mixed use on such delayed effective date;

(4) assign or reassign other frequencies to Federal Government stations as necessary to adjust to such withdrawal or limitation of assignments; and

(5) transmit a notice and description to the Commission and each House of Congress of the actions taken under this subsection.

(b) EXCEPTIONS.—

(1) AUTHORITY TO SUBSTITUTE.—If the President determines that a circumstance described in paragraph (2) exists, the President—

(A) may substitute an alternative frequency or band of frequencies for the frequency or band that is subject to such determination and withdraw (or limit) the assignment of that alternative frequency or band in the manner required by subsection (a); and

(B) shall submit a statement of the reasons for taking the action described in subparagraph (A) to the Committee on Energy and Commerce of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate.

(2) GROUNDS FOR SUBSTITUTION.—For purposes of paragraph (1), the following circumstances are designed in this paragraph:

(A) the reassignment would seriously jeopardize the national defense interests of the United States;

(B) the frequency proposed for reassignment is uniquely suited to meeting important governmental needs;

(C) the reassignment would seriously jeopardize public health or safety; or

(D) the reassignment will result in costs to the Federal Government that are excessive in relation to the benefits that may be obtained from commercial or other non-Federal uses of the reassigned frequency.

(3) CRITERIA FOR SUBSTITUTED FREQUENCIES.—For purposes of paragraph (1), a frequency may not be substituted for a frequency identified by the report of the Secretary under section 4(a) unless the substitute frequency also meets each of the criteria specified by section 4)a).

(4) DELAYS IN IMPLEMENTATION.—If the President determines that any action cannot be completed by the delayed effective date recommended by the Secretary pursuant to section 4(e), or that such an action by such date would result in a frequency being unused as a consequence of the Commission's plan under section 6, the President may—

(A) withdraw or limit the assignment to Federal Government stations on a later date that is consistent with such plan, except that the President shall notify each committee specified in paragraph (1)(B) and the Commission of the reason that withdrawal or limitation at a later date is required; or

(B) substitute alternative frequencies pursuant to the provisions of this subsection.

(c) LIMITATION ON DELEGATION.—Notwithstanding any other provision of law, the authorities and duties established by this section may not be delegated.

SEC. 6. DISTRIBUTION OF FREQUENCIES BY THE COMMISSION

Not later than 1 year after the President notifies the Commission pursuant to section 5(a)(5), the Commission shall prepare, in consultation with the Assistant Secretary of Commerce for Communications and Information when necessary, and submit to the President and the Congress, a plan for the distribution under the Act of the frequency bands reallocated pursuant to the requirements of this Act. Such plan shall—

(1) not propose the immediate distribution of all such frequencies, but, taking into account the timetable recommended by the Secretary pursuant to section 4(e), shall propose—

(A) gradually to distribute the frequencies remaining, after making the reservations required by subparagraph (B), over the course of a period of not less than 10 years beginning on the date of submission of such plan; and

(B) to reserve a significant portion of such frequencies for distribution beginning after the end of such 10-year period;

(2) contain appropriate provisions to ensure—

(A) the availability of frequencies for new technologies and services in accordance with the policies of section 7 of the Act (47 U.S.C. 157); and

(B) the availability of frequencies to stimulate the development of such technologies;

(3) address (A) the feasibility of reallocating spectrum from current commercial and other non-Federal uses to provide for more efficient use of the spectrum, and (B) innovation and marketplace developments that may affect the relative efficiencies of different spectrum allocations; and

(4) not prevent the Commission from allocating bands of frequencies for specific uses in future rulemaking proceedings.

SEC. 7. AUTHORITY TO RECOVER REASSIGNED FREQUENCIES.

(a) AUTHORITY OF PRESIDENT.—Subsequent to the withdrawal of assignment to Federal Government stations pursuant to section 5, the President may reclaim reassigned frequencies for reassignment to Federal Government stations in accordance with this section.

(b) PROCEDURE FOR RECLAIMING FREQUENCIES.—

(1) UNALLOCATED FREQUENCIES.—If the frequencies to be reclaimed have not been allocated or assigned by the Commission pursuant to the Act, the President shall follow the procedures for substitution of frequencies established by section 5(b) of this Act.

(2) ALLOCATED FREQUENCIES.—If the frequencies to be reclaimed have been allocated or assigned by the Commission, the President shall follow the proce-

dures for substitution of the frequencies established by section 5(b) of this Act, except that the notification required by section 5(b)(1)(A) shall include—

(A) a timetable to accommodate an orderly transition for licensees to obtain new frequencies and equipment necessary to obtain new frequencies and equipment necessary for its utilization; and

(B) an estimate of the cost of displacing spectrum users licensed by the Commission.

(c) COSTS OF RECLAIMING FREQUENCIES; APPROPRIATIONS AUTHORIZED.—The Federal Government shall bear all costs of reclaiming frequencies pursuant to this section, including the cost of equipment which is rendered unusable, the cost of relocating operations to a different frequency band, and any other costs that are directly attributable to the reclaiming of the frequency pursuant to this section. There are authorized to be appropriated such sums as may be necessary to carry out the purposes of this section.

(d) EFFECTIVE DATE OF RECLAIMED FREQUENCIES.—The Commission shall not withdraw licenses for any reclaimed frequencies until the end of the fiscal year following the fiscal year in which the President's notification is received.

(e) EFFECT ON OTHER LAW.—Nothing in this section shall be construed to limit or otherwise affect the authority of the President under sections 305 and 706 of the Act (47 U.S.C. 606).

SEC. 8. DEFINITIONS.

As used in this Act:

(1) The term "allocation" means an entry in the National Table of Frequency Allocations of a given frequency band for the purpose of its use by one or more radiocommunication services.

(2) The term "assignment" means an authorization given to a station licensee to use specific frequencies or channels.

(3) The term "commercial carrier" means any entity that uses a facility licensed by the Federal Communications Commission pursuant to the Communications Act of 1934 for hire or for its own use, but does not include Federal Government stations licensed pursuant to section 305 of the Act (47 U.S.C. 305).

(4) The term "Commission" means the Federal Communications Commission.

(5) The term "Secretary" means the Secretary of Commerce.

(6) The term "the Act" means the Communications Act of 1934 (47 U.S.C. 151 et seq.).

PURPOSE AND SUMMARY

H.R. 531, the "Emerging Telecommunications Technologies Act of 1991," reallocates radio frequency spectrum to promote the development of new technologies for commercial purposes. The bill requires the Secretary of Commerce (the Secretary) to identify and transfer for reallocation not less than 200 megahertz (mHz) of spectrum to the Federal Communications Commission. The Commission shall reassign such spectrum, currently assigned to federal government users, to private users and to public safety agencies to promote the development and use of emerging telecommunications technologies, to protect the public interest, and for other purposes.

In summary, H.R. 531 establishes procedures for the identification of the frequencies to be reallocated. The legislation requires that 90% of the identified frequencies be below 5 gigahertz (gHz), and limits the percentage of identified spectrum that can be shared between federal government and non-federal government users. It sets up a timetable for reallocation that recommends effective dates by which the President may withdraw or limit frequency assignments. In addition, the bill establishes statutory guidelines for the withdrawal of frequency assignments from government stations, and grants the President the authority to recover reassigned frequencies in the case of a national emergency, or for other reasons. The bill also permits the Secretary to expedite the transfer of up to 30 mHz of spectrum to the Commission for reallocation to

non-federal users. Finally, H.R. 531 requires the Assistant Secretary for Communications and Information and the Chairman of the Commission to conduct joint spectrum planning.

BACKGROUND AND NEED FOR THE LEGISLATION

The radio spectrum

The radio spectrum is part of the larger electromagnetic spectrum, which is the entire range of all radiating energy. The spectrum is a natural resource which is non-depletable but finite. Radio spectrum is measured in wavelengths or cycles. "Frequency" is the term used to describe the number of cycles completed in one second. One cycle per second is called a hertz (Hz). The radio spectrum is defined as the range of frequencies extending from 10 kilohertz (kHz) to 300 gigahertz (gHz). These frequencies are located below those of visible light and above those of audible sound.

The radio spectrum is the medium that makes possible wireless communications such as land mobile radio, shortwave and commercial radio, television broadcasting, microwave telephone relays, cellular telephones, navigational radio and satellite transmissions. In 1990, commercial enterprises which depend on the radio spectrum to transmit their signals generated more than $100 billion in annual revenues.

Spectrum management

Two federal agencies, the National Telecommunications and Information Administration (NTIA) and the Federal Communications Commission (FCC), have authority over the radio spectrum in the United States. The NTIA, under the Department of Commerce, is responsible for allocating, assigning, and maintaining efficient use of the radio spectrum assigned to federal government users. The NTIA utilizes the Interdepartmental Radio Advisory Committee (IRAC) to establish priorities and encourage efficient spectrum use by federal government users. However, the Committee record includes evidence that the federal government does not always employ the most proficient use of its assigned frequencies, nor use the most spectrum-efficient technologies in every case. The Committee record contains testimony, including that of the current, and all former NTIA Administrators, which argues that the federal government could use spectrum more effectively.

The FCC is responsible for the radio spectrum used by private sector and non-federal government users. The Commission's spectrum management responsibilities are similar to those of NTIA. These responsibilities include licensing the use of discrete frequencies for the operation of individual spectrum-dependent equipment, and enforcing its regulations governing the proper use of the spectrum. The Commission's adversarial rulemaking and licensing procedures have forced commercial and public safety users to utilize the most advanced spectrum technologies available, and promoted more efficient spectrum use in the both the private sector and the public safety community.

Spectrum utilization

Commission officials contend that virtually all of the spectrum (below 20 gHz) currently is being utilized. The frequencies above 20 gHz are utilized for fewer applications because of the limitations imposed by the current state of technology. The lack of unassigned, usable spectrum available for commercial and non-federal government users has forced the Commission to postpone or forgo spectrum assignments for many worthwhile uses and technologies, and is imposing unacceptable levels of congestion in many areas. In fact, the Committee record indicates that scarcity of spectrum has limited competition in many spectrum-dependent industries and has resulted in increased cost to American businesses and consumers.

An example of the dilemma that spectrum managers must face due to spectrum congestion was provided several years ago, when the Commission was forced to reallocate two mHz of spectrum that had been utilized, on a secondary basis, by the Amateur Radio Service. The Amateur Service has established an impressive record of providing life-saving emergency communications during natural disasters and accidents, when more conventional methods of communications were rendered inoperable. Yet because of the lack of alternative frequencies, the Commission was forced to take away these two mHz in return for giving the Service "primary" access to an adjacent three mHz band. Passage of H.R. 531 will alleviate the pressure to take more spectrum from the Amateur Service by providing frequencies for new technologies in other bands.

The Committee rcord also demonstrates that the lack of available spectrum is stifling the introduction of new technologies. The Committee anticipates that the passage of this legislation will reverse this situation, and allow the Commission to allocate additional frequencies to new and innovative technologies.

The majority of the witnesses who testified before the Committee, including the current and the former Administrators of NTIA, advocated methods of encouraging private sector investment in newer, innovative spectrum-efficient technologies. Private sector witnesses submitted evidence which demonstrated that investment by the private sector in the research and development of new technologies would increase significantly if the Commission gave favorable consideration to applications submitted by those who had researched and developed, or "pioneered", innovative technologies.

International considerations

The United States is currently preparing for the Mobile World Administrative Radio Conference (WARC) in 1992. This international conference of the International Telecommunications Union (ITU) will make pivotal determinations regarding the allocations of radio spectrum for new mobile radio technologies. United States action in identifying and allocating spectrum for these new technologies in advance of this conference will significantly improve our ability to promote the interests of U.S. telecommunications manufacturers, service providers and end users.

Many of our international competitors have identified frequencies for the commercial development of new mobile radio applica-

tions. For example, the British (U.K.) government has allocated 200 mHz to microcell, a new technology for land mobile communications. Microcell combines landline telephone services with "cellularized" mobile services, providing users almost constant access to the telephone network.

There are currently several different programs in Europe related to mobile and personal communications. Each of these programs will require spectrum allocations before they can be made available to the public. Near-term programs include Pan European Digital Cellular, with an allocation of 50 mHz, and Europe-wide Cordless Telephone 2 (CT-2), with an allocation of 4 mHz in the U.K. Germany and France are considering similar allocations for CT-2. The Conference of European PTT's (CEPT), through its frequency advisory committee, has recommended 20 mHz be made available in Europe for Digital European Cordless Telephone (DECT). Most of these reallocations will require PTT (telephone) fixed radio links and military systems to vacate some spectrum in order to have frequencies available for the new services.

Pacific Rim countries are also taking steps to ensure that adequate spectrum is available for emerging technologies. For example, the Japanese government has announced a 300 mHz allocation for advanced wireless communications.

HEARINGS

The Committee's Subcommittee on Telecommunications and Finance held two days of hearing on H.R. 531 on February 21, and March 12, 1991. Testimony was received from the following witnesses: The Honorable Alfred C. Sikes, Chairman, Federal Communications Commission; Mr. Ronald Grawert, Vice President, Technology Planning, GTE Mobile Communications Group; Mr. Edward R. Cheramy, President, IDB Communications Group, Inc.; Mr. Eric J. Schimmel, Vice President, Telecommunications Industry Association; Mr. Larry Gitten, Director, Wireless Architecture, AT&T Bell Labs; Mr. William J. Bratton, Chief, New York City Transit Police Department; The Honorable Janice Obuchowski, Assistant Secretary for Communications and Information, National Telecommunications and Information Administration, U.S. Department of Commerce; Mr. Wayne Perry, McCaw Cellular Communications, Inc., Board of Directors, Cellular Telecommunications Industry Association; Mr. W.P. Williamson III, President, WKBN Broadcasting Corporation; Mr. Isaac R. Nassi, Ph.D., Director, Eastern Research and Technology, Apple Computer Incorporated; Mr. Robert M. Harris, Manager, Eastern New Mexico Rural Telephone Cooperative; Mr. Richard Foreman, Assistant Sheriff, County of Los Angeles; and Mr. Wayne Schelle, Chairman, American Personal Communications, Inc.

H.R. 531 is substantially similar to H.R. 2965, which passed the House in 1990. In the 101st Congress, the Subcommittee held legislative hearings on H.R. 2965 on November 2, 1989, February 8, 1990, and April 30, 1990.

COMMITTEE CONSIDERATION

On May 2, 1991, the Subcommittee on Telecommunications and Finance met in open session and ordered reported the bill (H.R. 531), as amended, by a voice vote, a quorom being present. On May 21, 1991, the full Committee on Energy and Commerce met in open session and ordered reported the bill H.R. 531, as amended, by voice vote, a quorum being present.

COMMITTEE OVERSIGHT FINDINGS

Pursuant to clause 2(l)(3)(A) of rule XI of the Rules of the House of Representatives, the Committee makes oversight findings reflected in the legislative report.

COMMITTEE ON GOVERNMENT OPERATIONS

Pursuant to clause 2(l)(3)(D) of rule XI of the Rules of the House of Representatives, no oversight findings have been submitted to the Committee by the Committee on Government Operations.

COMMITTEE COST ESTIMATE

In compliance with clause 7(a) of rule XIII of the Rules of the House of Representatives, the Committee believes that the cost incurred in carrying out H.R. 531 would be approximately $1 million per year for FY 1992-96.

CONGRESSIONAL BUDGET OFFICE ESTIMATE

U.S. CONGRESS,
CONGRESSIONAL BUDGET OFFICE,
Washington, DC, June 10, 1991.

Hon. JOHN D. DINGELL,
Chairman, Committee on Energy and Commerce,
U.S. House of Representatives, Washington, DC.

DEAR MR. CHAIRMAN: The Congressional Budget Office has reviewed H.R. 531, the Emerging Telecommunications Technologies Act of 1991, as ordered reported by the House Committee on Energy and Commerce, May 21, 1991. The cost to federal agencies of implementing this bill is highly uncertain, but it could total hundreds of millions of dollars over the next 15 years, mostly to replace communications equipment so that agencies could use different frequencies on the electromagnetic spectrum. Developing and implementing the neccesary plans would cost about $5 million over the 1992-96 period, assuming appropriation of the necessary amounts.

BILL PURPOSE

H.R. 531 would establish procedures under which the President would reallocate segments of the electromagnetic spectrum from federal to nonfederal users. It would require the Department of Commerce (DOC) and the Federal Communications Commission (FCC) to recommend for rellocation bands of frequencies that total at least 200 megahertz located below 6 gigahertz. Under this bill, the bands selected for reallocation must be made available to nonfederal users over the next 15 years. The selected bands must also

satisfy criteria regarding federal and public needs, costs, and benefits.

The DOC must submit its preliminary recommendations within one year after the bill is enacted, and a final report within two years. H.R. 531 would authorize the Secretary to recommend an initial 30 megahertz for reallocation on an expedited basis. The President would implement the DOC plan, initiating the withdrawal of federal assignments within six months after the final report is completed. The FCC would devise and implement a plan for distributing the available frequencies to nonfederal users over a 10-year period.

H.R. 531 would formalize coordination between DOC and the FCC on spectrum planning, requiring the two agencies to meet at least biannually and to submit a joint annual report to the Congress. DOC must also convene an advisory committee to advise the Secretary on which bands of frequencies should be reallocated and on reforming procedures for allocating the spectrum between federal and nonfederal users.

BUDGETARY IMPACT

Enactment of this bill would increase the government's costs of administering and using the electromagnetic spectrum.

Cost of spectrum management.—Based on information from the National Telecommunications and Information Administration within DOC and the FCC, CBO estimates that federal agencies would spend a total of $5 million from 1992 through 1996 to support the analyses, plans, and actions required by the bill. Outlays would increase by $0.9 million in 1992 as agency planning begins; peak at $1.4 million in 1994 as the DOC and advisory committee reports are completed and the FCC's plan is drawn up; and then decline to $0.6 million by 1996 as agencies focus on implementation.

Although most of these costs would be borne by DOC and the FCC, the reallocation plans would involve all agencies that use the spectrum, including the Departments of Agriculture, Commerce, Defense, Energy, Health and Human Services, the Interior, Justice, Transportation, Treasury, and Veterans Affairs, as well as the National Aeronautics and Space Administration (NASA), the General Services Administration and the Postal Service.

This estimate does not include the cost to the FCC of licensing new users, which cannot be estimated until the Commission determines how and when the spectrum would be reallocated. These costs, and associated receipts from licensing fees, are unlikely to be significant until after 1995, because the FCC's plan for distributing the reallocated frequency bands would not be due until 42 months after enactment.

Costs of spectrum reallocation.—Depending on the recommendations and actions of the DOC and the FCC, a variety of federal agencies to which spectrum frequencies are currently assigned could incur substantial costs over a number of years if the frequencies that they use for their operations were reallocated under this bill. Costs would consist primarily of new property and equipment necessary to modify existing operations and to operate on different

frequencies. Many federal agencies have equipment specifically engineered for a particular band of the spectrum, which they would have to replace with new equipment or with substitute service. For example, tracking, telemetry, and control systems for many satellite communications systems have such spectrum-dependent equipment at each site. It is not possible to estimate these costs precisely because until DOC finishes the reallocation plan, we cannot detemine which frequencies would satisfy the criteria in the bill, or the extent to which equipment would be replaced during this period under current federal and international guidelines.

Though limited, existing data suggests that the government's current investment in spectrum-dependent equipment is concentrated in certain agencies and bands. For example, nondefense agencies have invested at least $38 billion, of which $30 billion has been spent by NASA and $6.5 billion by the Federal Aviation Administration. Virtually all of NASA's equipment is designed to use bands spanning less than 200 megahertz. Similar data are not available for the Department of Defense, but officials estimate that its investment could match the nondefense total.

The costs to modify existing operations would depend on the affected agencies and the equipment and facilities they would have to replace or relocate. These could vary widely depending on the specific frequencies chosen for relocation. The federal investment ranges from hundreds of millions of dollars per megahertz to only a few million dollars per megahertz. Some bands host thousands of federal frequencies, others less than 50. For the purpose of this estimate, we assume that the criteria in H.R. 531 would lead DOC to recommend gradually withdrawing from bands where the expense and disruption to the government would be relatively low.

Even if the timing of the reassignments largely coincides with agencies' scheduled replacement cycle, we would expect some incremental costs to be incurred as users are shifted to newer, and probably higher, frequencies. Government-wide, the shift of frequencies is likely to cost hundreds of dollars over the next 15 years. Most of these expenses would be incurred after the President withdraws federal assignments in 1994, but appropriations could be needed earlier if DOC recommends reallocating an initial 30 megahertz on an expedited basis.

H.R. 531 would authorize such sums as may be necessary for the government to reclaim any frequencies that were allocated for nonfederal use as a result of this bill. These costs cannot be estimated at this time, and would likely be incurred after 1996.

The Budget Enforcement Act of 1990 sets up pay-as-you-go procedures for legislation affecting direct spending or receipts through 1995. The only potential pay-as-you-go impact of this bill would involve the receipts generated by the FCC's licensing of the reallocated portions of the spectrum. CBO estimates that such receipts would not be significant until after 1995.

CBO estimates that enactment of this bill would result in no cost to state or local governments.

If you wish further details on this estimate, we will be pleased to provide them. The CBO staff contact is Marjorie Miller, who can be reached at 226-2860.

Sincerely,

ROBERT D. REISCHAUER,
Director.

INFLATIONARY IMPACT STATEMENT

Pursuant to clause 2(l)(4) of rule XI of the Rules of the House of Representatives, the Committee makes the following statement with regard to the inflationary impact of the reported bill: H.R. 531 will have no inflationary impact.

SECTION-BY-SECTION ANALYSIS AND DISCUSSION

Section 1—Short title

This section designates that the bill may be cited as the "Emerging Telecommunications Technologies Act of 1991."

Section 2—Findings

In this section, the Committee finds that major advances in technology during the past fifty years have increased significantly the demand for radio spectrum. This increased demand for spectrum, especially among non-federal government users, have surpassed the availability of this finite resource.

The Committee further finds that, at present, approximately 40 percent of the electromagnetic spectrum is reserved for federal government use. Although a portion of this spectrum is shared with non-federal government users, the federal government maintains primary access to these frequencies.

When many of the frequencies were initially assigned, spectrum was plentiful and, therefore, efficient use of the spectrum was a secondary consideration to the prevention of interference. Recently, the increasing demand for spectrum among the private sector and non-federal government users has resulted in Commission proceedings requiring users to employ more spectrum-efficient technologies. However, federal government users are not subjected to the discipline imposed by the Commission's proceedings. As a result, Government users have not implemented spectrum-efficient technologies as extensively as have Commission licensees. The Committee finds that many of the frequencies reserved for government licenses are under-utilized or inefficiently used. Some of the reserved frequencies are unused by government licensees. The Committee finds that the public interest requires many of the reserved frequencies to be utilized more efficiently by government or commercial operators.

Furthermore, the Committee finds that some frequencies are assigned for services that could be obtained more efficiently from commercial carriers or other vendors. For example, some radio communications could be carried over coaxial cable or fiber optic lines. This would free up frequencies for uses that could not substitute wire-based transmission media. The Committee record indicates that the government is using spectrum-dependent technologies to provide services that could be obtained more efficiently

from commercial carriers using commercially available technologies.

The Committee recognizes that the scarcity of assignable frequencies for commercial use will impede the development and commercialization of new telecommunications products and services as well as reduce the capacity and the efficiency of the United States' telecommunications systems. These deficiencies will adversely affect the productive capacity and international competitiveness of the United States economy. In addition, the Committee recognizes that these deficiencies may prevent some State and local police, fire, and emergency services from obtaining radio channels urgently needed to protect the public.

The Committee also finds that the availability of additional spectrum for commercial purposes will promote the emergence of new industries, create products and services for the American consumer, provide additional jobs in the U.S., and improve our nation's international competitiveness. The $5.1 billion cellular industry, for example, was made possible by an action in 1968, when the government relinquished approximately 50 mHz of spectrum for commercial use.

The Committee record indicates that the nations and businesses which commercialize a new technology frequently gain significant competitive advantages in international markets. These early entrants often establish de facto technical standards in the market and attain lower production costs through economies of scale. This legislation is designed to ensure that the United States' commercial interests have spectrm resources available to compete successfully in these increasingly important emerging markets.

Finally, the Committee finds that the President, the Secretary and the Commission should be directed to take appropriate steps to correct these deficiencies in order to ensure that America has the spectrum it needs to compete in a broad range of emerging technologies.

Section 3—National spectrum planning

The Committee recognizes that difficulties often result from the absence of a formal long-range planning process to anticipate future spectrum demands and reserve spectrum to meet such demands. Neither the National Telecommunications and Information Administration (NTIA) nor the Commission has a comprehensive planning document that is updated on a regular basis.

Since the spectrum is a limited resource, the effective planning for its future use is needed to maximize the spectrum's potential usage and guard against harmful interference. Therefore, under subsection (a), the Assistant Secretary of Commerce for Communications and Information and the Chairman of the Commission are required to conduct periodic joint spectrum planning. Such spectrum planning is to occur at least biannually, and must include consideration of future spectrum requirements for public and private uses, and the spectrum allocations necessary to meet those requirements.

Subsection (b) requires the Assistant Secretary and the Chairman of the Commission to submit to Congress an annual report on the joint spectrum planning activities. In conducting their joint

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spectrum planning, the Committee expects that, when appropriate, NTIA and the Commission will solicit comments from the public during the planning process. Soliciting public comments may be in the form of public meetings, Notice of Inquiries or other appropriate procedures.

Subsection (c) requires that the first annual report submitted after the advisory committee's initial recommendations (as required in section 4(d)(4)) to include an analysis and response to these recommendations of the advisory committee. In addition, the first annual report will include an analysis of the spectrum efficiency of maintaining separate allocations for federal government and non-federal government licensees for the same or similar services.

The Committee notes that currently, NTIA and the FCC each administer adjacent blocks of frequencies for the same or similar purposes. For example, NTIA has licensed government fixed microwave users to utilize frequencies between 1710 mHz and 1850 mHz. The FCC licenses non-federal fixed microwave users on frequencies between 1850 mHz and 1990 mHz. Maintaining separate blocks of frequencies for fixed microwave services constitutes an inefficient approach to spectrum management. That inefficiency is particularly egregious in this instance, inasmuch as it is relatively easy to engineer fixed microwave networks—of both federal and non-federal users—so as to avoid harmful interference.

The Committee anticipates that the review required by this section will result in the identification of other inefficient uses of the spectrum, and that all such inefficiencies will be remedied expeditiously utilizing the existing authorities of the FCC and NTIA.

Recently, the NTIA completed its first comprehensive examination of fundamental radio spectrum policy issues in an attempt to improve its existing procedures and in order to promote efficient access to the spectrum and enhance U.S. international competitiveness. In addition, the Committee record contains testimony from the present Chairman of the Commission, the Honorable Alfred C. Sikes, announcing a spectrum reserve proceeding to set aside frequencies for emerging radio-based technologies. The Committee commends these overdue initiatives and views these activities as complementary to H.R. 531.

Section 4—Identification of reallocable frequencies

Subsection (a) requires the Secretary to submit a report within 24 months to the President and Congress, identifying and recommending for reallocation frequencies that are assigned to federal government stations and are not required for the present or identifiable future needs of the federal government. The frequencies are to be those which are, or will be, feasible to make available during the next 15 years and have the greatest potential for commercial use under the Act. In identifying bands of frequencies for reallocation, the Secretary is to consider the relative costs to the Federal Government, in relation to the benefits to commercial users, of transferring the spectrum. The Secretary is also required to identify bands of frequencies which are most likely to have the greatest potential use and provide the greatest public benefit under the Act. This requirement is based on evidence in the Committee record

that certain frequencies are better suited for a broad range of radio-based technologies. Due to technical constraints and propagation characteristics, other bands of frequencies are less well suited to many spectrum dependent applications.

It is the Committee's intent that achieving more efficient use of spectrum by government licensees not be accomplished at the expense of safety. For example, commercial aviation uses radio technologies for a variety of safety-related communications, navigation and surveillance purposes. The Federal Air Regulations require domestic and flag air carriers to maintain a constant, two-way air-ground radio communication system; as a result, the commercial airline industry is making significant investments in such systems to ensure safe air travel.

The Committee believes that the implementation of this legislation will not result in the degradation of this or other safety-related service. In implementing this Act, the FCC and NTIA should take special care not to derogate treaty obligations of the United States that would affect safety, including civil aviation and aeronautical safety services.

Subsection (b) establishes a minimum requirement for the amount of spectrum to be identified and recommended for reallocation. Within two years after enactment of this legislation, the Secretary of Commerce is required to identify and recommend the frequencies for reallocation. The frequencies identified must span at least 200 mHz of the total spectrum and must be located below 5 gHz; except that a maximum of 20 megahertz of the identified frequencies may be located between 5 and 6 gigahertz.

The government may retain some frequencies for its own use, but share those frequencies with FCC licensees. However, these shared frequencies may not count toward more than one-half, or 100 mHz, of the total 200 megahertz required to be identified. The legislation requires that assignments of a band of frequencies for shared use by FCC licensees and Federal Government stations limit federal government use by geographic area, by time, or by other means. The purpose of this provision is to ensure that frequencies that are to be shared be made available in areas where there is substantial congestion, or where there is a concentration of population of potential users. While H.R. 531 does not contain a specific percentage of the population that must have access to the shared frequencies, the Committee recommends that the Secretary make every effort to ensure that such frequencies be made available to FCC licensees in at least 80 percent of the area of the United States, and include as many metropolitan areas as possible. This provision will ensure that use by federal government users is substantially less than the potential use to be made by the FCC licensees. In addition, the legislation requires the Federal Communications Commission to establish coordination procedures for operational sharing permitted under this section.

Subsection (c) requires the Secretary, in identifying the spectrum for reallocation, to consider if the government frequency is being used to provide a communications service that is also available from a commercial vendor. This is done to increase spectrum efficiency by relying upon commercially available substitutes, and the

use of non-radiating technologies such as coaxial cable or fiber optic technologies, wherever feasible.

When selecting frequencies for reallocation, the Secretary also shall consider the availability of equipment available to utilize that part of the spectrum, and the proximity of nearby frequencies that are being used for commercial purposes. The Secretary must also consider the allocation decisions of foreign governments, in order to make sure that domestic communications equipment manufacturers are not placed at a competitive disadvantage. It is the Committee's intent that this requirement will strengthen the competitiveness of U.S. companies in the United States and abroad.

Subsection 4(c)(4) provides additional criteria which the Secretary of Commerce must consider in identifying the 200 mHz of government spectrum. Specifically, the frequencies that Federal power agencies are licensed to use may only be eligible for mixed use in geographically separate areas and shall not be subject to withdrawal as part of the minimum 200 mHz that is required by this section 4(b) of this Act. In addition, the Secretary of Commerce should seek to avoid serious degradation of government services and operations and to avoid excessive costs to civilian users of government services.

While fulfilling the obligations of this section, the Secretary must assume that there will be reasonable rates of scientific progress and growth in demand for telecommunications services, and that the frequencies identified for reassignment will be assigned by the Federal Communications Commission within a fifteen-year period. These assumptions will help to assure that the frequencies that are reallocated will be able to be utilized as the state of the radio art advances, as well as help stimulate the development of new spectrum dependent technologies.

Subsection (d) describes the procedures for the identification of frequencies. The Secretary is required to prepare and submit to Congress, within 12 months, a report which makes preliminary identification of frequencies to be reallocated. The Secretary is to convene an advisory committee to review the frequencies identified in the preliminary report. The purpose of the advisory committee is to advise the Secretary with respect to the frequencies which should be included in the final report and to prepare a report containing recommendations for reforming the process of allocating frequencies between federal and non-federal users spectrum allocation procedures. The committee is required to meet at least monthly until each of the actions required by section 5(a) has taken place.

The advisory committee is to be composed of the Chairman of the Commission and the Assistant Secretary, and one other representative of the Federal Government as designated by the Secretary. In addition, the advisory Committee is to include representatives of the U.S. manufacturers of spectrum-dependent telecommunications equipment, commercial carriers, and other users of the electromagnetic spectrum including radio and television licensees, State and local public safety agencies, the aviation industry and other interested members of the public who are knowledgeable about the uses of the electromagnetic spectrum. It is the Committee's intention that representatives of radio and television licensees, State and local public safety agencies and the aviation industry be included

on the advisory committee. In addition, H.R. 531 also requires that other interested members of the public who are knowledgeable about the uses of the electromagnetic spectrum be named.

While the enactment of H.R. 531 will provide a dramatic infusion of spectrum for commercial assignment, the Committee is concerned that the 70-year-old procedures for allocating spectrum between government and nongovernment users are insufficient to permit effective spectrum management techniques. The Committee intends that the Advisory Committee's Report identify inefficiencies in the current system, and recommendations for improvements, to the maximum extent possible. The Committee is also concerned that the current process for meeting the spectrum needs of government users may be too accommodating. The government's own spectrum decisions—made behind closed doors, without public scrutiny—lack the discipline imposed on commercial users by the adversarial process used by the FCC. It is the Committee's intention that the Advisory Committee Report include recommendations that will increase the spectrum efficiency of government users by subjecting their requests for spectrum to more vigorous examination.

Finally, the Committee intends that the Advisory Committee make recommendations on how allocations and assignments for government users can be reviewed periodically to ensure that technological development or changes in government needs can reduce the demand for spectrum by government users.

Subsection (e) requires the Secretary to include a timetable for reallocation that recommends immediate and delayed effective dates by which the President shall withdraw or limit assignments on the frequencies specified in the report. These delayed effective dates shall permit the earliest possible reallocation of the frequency bands, while taking into account the relationship between the cost to the federal government of changing to different frequencies and the commercial benefits of reassignment of these frequencies. The effective dates shall be based on the useful remaining life of existing equipment and the need to coordinate frequency use with other nations.

In order to expedite the availability of at least a portion of the spectrum to be reassigned, H.R. 531 authorizes the Secretary to identify an initial 30 megahertz of spectrum to be made available for reallocation immediately upon issuance of the report. The Committee strongly encourages the Secretary to identify as soon as possible an initial 30 mHz that can be made available to the FCC on an expedited basis.

Section 5—Withdrawal of assignment to government stations

Subsection (a) requires the President to withdraw the assignment to a government station of any frequency recommended in the Secretary's report for immediate reallocation within six months after receiving such report. Pursuant to the provisions of this section, the President also is required to limit the assignment to a government station of any frequency the report recommends for immediate mixed use. The President shall withdraw or limit the assignment to a federal government station of any frequency which is recommended for reallocation or mixed use by the delayed effective

dates described in the Secretary's report. This timetable will allow optimal use of frequencies that have been selected for reallocation and should impose only a minimal financial burden on the government. In addition, the President shall provide the government with frequencies for those displaced by shared arrangements or reassignment, if necessary, and notify each House of Congress and the Commission of the actions taken pursuant to this Act.

In subsection (b) the Committee recognizes that exceptions may be required to the recommendations made by the Secretary and provides procedures to be utilized by the President when the criteria established in subsection (b) are met. Specifically, if the President determines that reallocation or mixed use of certain frequencies may jeopardize the national defense, endanger the public's health and safety, deprive the government of an important function, or cause the government to incur undue costs he may substitute alternative frequencies for the frequencies that meet these criteria.

In addition, the President may delay implementation of frequency reallocations specified in the Secretary's report if it is determined that the required action cannot be completed by the recommended delayed effective dates or if such an action would result in a frequency being unused. These provisions will allow the maximum use of federal government frequency until it is transferred to the FCC for reassignment, and provide more flexibility for government users of the frequency. Whenever a frequency is substituted for those recommended by the Secretary, the President is required to notify the Committee on Energy and Commerce of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate of the reasons for such substitution.

Subsection (c) limits the ability of the President to delegate the functions assigned by the Act.

Section 6—Distribution of frequencies by the Commission

This section states that no less than one year after the President notifies the FCC of a frequency band to be reallocated, pursuant to section 5(a)(5), the Commission is required to submit to the President and Congress a plan for distribution of the reassigned frequencies. This plan shall not propose the immediate distribution of frequencies, and must take into account the timetable recommended by the Secretary. In order to provide a long-term solution for the scarcity of spectrum for emerging technologies, this section requires the Commission to reserve a significant portion of frequencies for distribution more than ten years after this legislation is enacted, with the remainder to be gradually distributed over a period of not less than ten years.

The provisions of the Commission's allocation plan must ensure the future availability of frequencies for new technologies and services; address the feasibility of reallocating spectrum from current commercial and non-federal uses to provide for more efficient use of the spectrum, and allow for innovation and marketplace development that may affect the relative efficiencies of different spectrum allocations. Nothig in this section shall prohibit the Commission from allocating bands of frequencies for specific purpose in future rulemaking proceedings.

The Committee does not intend that the report required by this section tie the Commission's hands during the long process of spectrum allocation envisaged by this legislation. Rather, the Committee assumes that the Commission will take account of new developments, including new technologies and services developed after the report has been submitted to the President and Congress, when it actually is called upon to allocate the spectrum at issue.

Section 7—Authority to recover reassigned frequencies

Section 7 establishes the process by which the President can reclaim frequencies which have already been reallocated to the FCC for reassignment.

Subsection (b) authorizes and establishes procedures pursuant which the President may reclaim frequencies which have not been distributed by the Commission. If frequencies have been assigned, the President must also provide a timetable to allow an orderly transition for FCC licensees to obtain new frequencies and necessary equipment, together with an estimate of the cost of displacing commercial licensees.

Subsection (c) stipulates that all costs of reclaiming frequencies pursuant to section 7 shall be borne by the federal government.

Subsection (d) prohibits the Federal Communications Commission from withdrawing licenses for any reclaimed frequencies until the end of the fiscal year following the President's notification.

Subsection (e) stipulates that nothing contained in H.R. 531 limits or otherwise affects the President's authority under section 305 and 706 of the Communications Act, including his ability to withdraw or limit the use of all frequencies utilized by Government users. In particular the President's authority to limit or withdraw licenses to utilize the frequencies affected by the provisions of section 4(c)(4) is not affected by the provisions of this Act.

Section 8—Definitions

Section 8 contains the definitions for the terms contained in H.R. 531.

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